

Math 357
Short quiz 05

2024-01-26 (F)

Your name: _____

Let R be a commutative ring with multiplicative identity $1 \neq 0$, and let $I \trianglelefteq R$. Characterize the algebraic structure of the quotient ring R/I in the cases when (i) I is prime and (ii) I is maximal. Briefly describe how the relationship between prime and maximal ideals relates to the relationship between these algebraic structures.